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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/844,470	04/27/2001	Aamer Sachedina	CA920000004US1	1865

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EXAMINER	
TANG, KENNETH	

ART UNIT	PAPER NUMBER
2127	

DATE MAILED: 11/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/844,470	SACHEDINA ET AL.	
	Examiner	Art Unit	
	Kenneth Tang	2127	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 July 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 April 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-24 are presented for examination.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable by Boland et al. (hereinafter Boland) (US 5,826,079) in view of Jones et al. (hereinafter Jones) (US 5,812,844).

3. As to claim 1, Boland teaches the invention substantially as claimed including a computer system comprising:

tasks potentially contending for a latch, each task comprising *(col. 1, lines 34-37)*:

a probability determining component (affinity scheduler) to dynamically (periodically examined and dynamic) estimate the probability (affinity) that the task will successfully acquire the latch *(col. 1, lines 59-67, col. 2, line 22, col. 3, lines 12-13)*; and

a suspending component (sleep/wakeup facility) to place the task in a suspended state *(col. 7, lines 3-6)* the estimated probability (affinity) is below a predetermined threshold value (sleeps when under predetermined threshold, wakeup when above predetermined threshold) *(see Abstract)*.

4. As stated above, Boland teaches that the sleep/wakeup facility will execute a sleep or wakeup based on a predetermined threshold. Boland, however, fails to explicitly teach that there is a defined sleep time. Jones teaches time-specific thread execution scheduling wherein threads are requested to sleep until a specified future wake-up time *(col. 10, lines 54-67 through col. 11, lines 1-12)*. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the feature of a defined sleep time to the existing affinity process scheduling system of Boland because this would improve Boland's affinity process scheduling system by allowing it to know exactly when the threads are awoken from sleeping *(col. 10, lines 54-67 through col. 11, lines 1-12)*.

5. As to claim 2, Boland teaches in which the suspending component increments the defined sleep time by a heuristically determined constant factor for successive entries of the task into the suspended state *(col. 5, lines 27-30)*.

6. As to claim 3, Boland teaches in which the sleep time is capped at a predetermined maximum value (aged and age of a process exceeds some threshold) *(col. 2, lines 13-18)*.

7. As to claim 4, Boland teaches in which the suspending component adjusts the defined sleep time in accordance with charges in the estimated probability that the task will successfully acquire the latch *(col. 5, lines 27-30)*.

8. As to claim 5, it is rejected for the same reasons as stated in the rejection of claim 3.

9. As to claim 6, Boland teaches in which the suspending component bases the defined sleep time on a predicted number of instructions executed under the latch as calculated by a sample workload measurement *(col. 2, lines 13-21)*.

10. As to claim 7, it is rejected for the same reasons as stated in the rejection of claim 3.

11. As to claim 8, Boland teaches an affinity scheduler that has tasks that are contending for a latch/lock. Boland fails to explicitly teach in which the probability determining component estimates the probability that the task will successfully acquire the latch by taking the inverse of the number of tasks contending for the latch. However, it would have been obvious to one of ordinary skill in the art that the probability would be the inverse of the number of tasks contending for the latch because this is simply using standard mathematical probability concepts. For example, if there are two tasks for only one lock, then there is a ½ (50%) probability. If there are three tasks for only one lock, then there is a 1/3 (33%) probability, and so on.

12. As to claim 9, it is rejected for the same reasons as stated in the rejection of claim 1. In addition, Boland teaches the task reporting the above a and b (from claim 1) until the dynamically estimated probability of the task acquiring the latch is at or above the predetermined threshold value (wakeup performed by the sleep/wakeup facility), following which the task will contend for the latch *(col. 5, lines 5-33)*.

13. As to claim 10, it is rejected for the same reasons as stated in the rejection of claim 2.

14. As to claim 11, it is rejected for the same reasons as stated in the rejection of claim 3.

15. As to claim 12, it is rejected for the same reasons as stated in the rejection of claim 4.

16. As to claim 13, it is rejected for the same reasons as stated in the rejection of claim 5.

17. As to claim 14, it is rejected for the same reasons as stated in the rejection of claim 6.

18. As to claim 15, it is rejected for the same reasons as stated in the rejection of claim 7.

19. As to claim 16, it is rejected for the same reasons as stated in the rejection of claim 8.

20. As to claim 17, it is rejected for the same reasons as stated in the rejection of claim 9.

21. As to claim 18, it is rejected for the same reasons as stated in the rejection of claim 2.

22. As to claim 19, it is rejected for the same reasons as stated in the rejection of claim 3.

23. As to claim 20, it is rejected for the same reasons as stated in the rejection of claim 4.

24. As to claim 21, it is rejected for the same reasons as stated in the rejection of claim 5.

25. As to claim 22, it is rejected for the same reasons as stated in the rejection of claim 6.

26. As to claim 23, it is rejected for the same reasons as stated in the rejection of claim 7.

27. As to claim 24, it is rejected for the same reasons as stated in the rejection of claim 8.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth Tang whose telephone number is (571) 272-3772. The examiner can normally be reached on 8:30AM - 6:00PM, Every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kt
11/13/04

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